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ABSTRACT

The third volume of this handbook for professionals in librarianship, archival studies, and information science in Eastern and Southern Africa focuses on the user of information and documentation establishments in Kenya. The six papers included in this collection are: (1) "The Online User in a Developing Country: The Case of Kenya" (S. Ouma); (2) "Effects of Library Automation on Library Users" (M. A. W. Muiruri); (3) "The Role of a School Library and Its Applicability in Developing Countries: The Case for Kenya" (J. N. Otike); (4) "How Non-Book Materials Can Enhance User Education" (M. N. Mathu); (5) "User Studies: How To Identify Potential and Actual User Needs" (K. J. Mchombu); and (6) "Information and Users: How To Bring Them Together--The Intermediary Role of the Professional" (J. M. Ng'ang'a). References are included in each of the six papers, and two appendixes present a description of a news magazine, "Information Trends," and a list of 14 reports from the German Foundation for International Development. (GL)

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Lutz Hüttemann (Ed.)

LIBRARIANSHIP AND DOCUMENTATION STUDIES

A HANDBOOK OF TEACHING AND LEARNING MATERIALS

VOLUME 3

Bonn, Oktober 1987

DOK 1310 C/a

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INTRODUCTION

When the first volume of this handbook was published in September 1985 the Editorial Board believed that it would act as a catalyst for professionals of the three information studies disciplines (librarianship, archival studies and information science) in Eastern and Southern Africa to produce more articles which could serve as teaching and learning material for the various training programmes existing in this subregion. There were already difficulties in obtaining enough suitable material for the second volume published in September 1986. The call for contributions for the third volume in your hands now was obviously heard in Kenya only, as all accepted papers but one were submitted by authors from this country. This sad development will, consequently, lead to the abortion of the publication of future volumes of "Librarianship and Documentation Studies".

Nevertheless, DSE is still interested to promote the writing skills of African information studies professional. The Editorial Board recommended that the "Handbook" be replaced by a "News Magazine" entitled INFORMATION TRENDS - A Review of Developments in Information Studies in Eastern and Southern Africa, to be published in three issues in 1988. Further information on this endeavour can be found in Annex I of this publication. We hope that "Information Trends" will close a communication gap between the professionals of the subregion, and that many news items/short articles/reviews of events will be submitted to the members of the Editorial Board or to the Editorial Advisors in each country.

The third volume of "Librarianship and Information Studies" concentrates on articles about the user of information and documentation establishments in developing countries. The topics of the papers deal with the online user, the user and library automation, the users of school libraries, user education through non-book materials, the identification of user information needs as a subject for a course in library studies, and the role of the professional in bringing infor-

mation and users together. The study of these articles should bring all professionals closer to the "user", whose information needs we must know or anticipate and, certainly, satisfy. Our readers are notified that the articles of this volume represent the personal opinions of the authors and do not necessarily reflect the views of Governments, employing institutions, the editor or the publisher.

Please allow us to draw your attention to yet another publication of the DSE Information and Documentation Training Section: in April 1987 we managed to publish the four training modules used during the long vacation courses at the Department of Library Studies of the University of Botswana in the years 1984 to 1987 in a single document titled "Introduction to Librarianship and Documentation". It may be utilized by other information studies establishments of the Eastern and Southern African countries for in-service training or by individuals of the subregion for self-teaching purposes. This publication is, as many others cited in Annex II, available free of charge from the Publications Section of DSE Bonn.

Although this third volume of the "Handbook" will also be the last, we are proud to having provided an opportunity for information studies professionals of the subregion to publish their articles and thus to contribute to the improvement of available teaching material for the training of librarians, archivists and documentalists in Eastern and Southern Africa. We are confident that the new publication "Information Trends" will even better meet the objective of being a forum for professional acticities, exchange of experience and training opportunitites, and at the same time serve as teaching and learning material. "Librarianship and Documentation Studies" is dead - long live "Information Trends".

Lutz Hüttemann Bonn, September 1987

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THE ONLINE USER IN A DEVELOPING COUNTRY: THE CASE OF KENYA

by S. Ouma

INTRODUCTION

The online user can be categorized into the following groups:

1) Purchaser of online systems;
2) Individual users;
3) Institutional/Organizational users;
4) Information retrieval specialists.

Group one comprises those who have computerized their systems. Thus a library that has automated its services can be regarded as an online user.

The following two groups can be re-grouped under 'information seekers'. Thus those who present their queries to automated systems for online information retrieval are all information seekers. An information seeker can be an individual researcher or groups of researchers. Similarly, institutions can seek information on behalf of their employees, hence the term 'Organizational online user'.

The last category of online user is what some literature call 'Intermediaries'[1]. These are often information workers (specialists) such as librarians who undertake the search on behalf of the information seeker (end user). The latter presents a query to the information centre. The former may carry out a reference interview and then conducts the online search. The information seeker does not therefore come into contact with the online system. Intermediaries have been called 'information retrieval specialists'[2], others have called them 'search analysists'[3]. Intermediaries often take up the duties of online searching on full time basis. They would therefore handle several queries a day and interrogate a number of databases. Be-

cause of this kind of undertaking they become more conversant with the various search strategies and may therefore be called specialists in this area.

For the purpose of this paper, therefore, the online user group will exclude the purchaser of online systems and concentrate on the other three groups. However, more so on the individual and the organizational user. The paper views the online user in line with the effectiveness of the service they receive from the system. Suggestions will be drawn on how best a system can serve this category of users.

To be able to get the right perspecitve of the online user group in a developing country the author outlines the situation in Kenya. Not much is available in this area in literature, hence personal interviews with various online users proved very useful.

AUTOMATION AND THE DEVELOPING WORLD

The developing world seems to have joined the 'bandwagon' of 'computerized' nations. Today everybody seems to want to computerize without asking themselves why, for what and when. It seems a symbol of 'progessiveness'. The 'Jones' have done it, why not us? seems an apparent slogan.

Librarians have perhaps been more timid in thinking about computerizing their systems. Similarly, it has been observed that the changes have been more dramatic for librarians than it has been in other fields. Today, almost every librarian in the developing world is anxious to give it a try if he/she can get the necessary resources. 'Are we not leapfrogging?' the theme of the IFLA Annual General Meeting for 1987 seems to pose a question[4]. One wonders why librarians in the developed world could still raise fears about computerization and not those in the developing world. Michael Cart, writing in 1987, had this to say: '... Well, I have just finished reading a three year backfile of Library Journal articles about

library automation and, I must admit, I am no longer scared. I am now terrified...'[5]. Well, if developing countries have decided to leapfrog against fears, then perhaps the Kenyan scene seems to have reached a step higher.

In Kenya, computers are being used for various jobs. Foreign companies that operate within the country have installed computers to operate their inhouse cores. Kenya's computer market is well catered for. With not less than 15 computer vendors around, those wishing to computerize have a very wide choice to pick from. The major computer vendors in the market include: IBM, NCR, ICL, CAL and BML among the giants[6].

Computerization is perhaps only half the story of information technology for the online user. There is the telecommunication aspect which is equally vital if we are to talk of online information retrieval. In most developing countries, the idea of online information retrieval is often associated with access to international databases. In order to do so, there must exist a very powerful telephone connection that can link installed terminals to these databases. Unfortunately Kenya like most developing countries continue to lack this facility.

DATABASES

Databases are of two types: There are bibliographic databases which normally contain citations of material which have been indexed into the computer. Depending on database vendors, such databases may or may not contain abstracts. Secondly, there are the nonbibliographic databases. These can be subdivided into two:

1) textual - which contain material contained in sources like encyclopaedias and directories;
2) numeric - which contain statistical data.

The distinction made above may also help us see the difference between 'databases' and 'databanks'. Most writers have referred to bibliographical files as databases and the non-bibliographical files as databanks. Furthermore, a reader ought to remember that most online databases have their printed equivalents.

Writing in 1985, Mrs. Were estimated the total number of world databases to be 1.800[7]. Apparently this may not have taken into account the numerous in-house databases being created by individual institutions and not run on commercial basis. The figure quoted above does not include any African databases either. The development of databases in Africa is perhaps in the pipeline with the creation of PADIS (Pan African Documentation and Information System).

THE KENYAN SCENE

A survey of special libraries in Nairobi[8] revealed that real online information retrieval connected to international databases does not exist in Kenya. What has been referred to as online is basically offline. What happens is that users approach libraries with queries. The information specialists to whom the query is presented then searches the relevant printed index. After verification, a telex may be sent to some firm abroad who then carries out the searches on behalf of the library in question. Very often, however, telexes are not used because they are expensive. A letter is therefore preferred. In turn the user gets the results of his/her search request mailed in print. This may take between 3 weeks to 6 weeks.

A number of libraries in Kenya employ this system and have made friendly arrangements with various institutions abroad who carry out the searches for them. Normally the searching institutions charge the requesting libraries for the search time and the print version of the search request.

Libraries that have ventured into this exercise include: ICIPE (International Centre for Insect Physiology and Ecology); ILRAD (Inter-

national Laboratory for Research on Animal Diseases); United Nations Institutions like UNEP and HABITAT; ICRAF (International Council for Research in Agro Forestry); KMFRI (Kenya Marine Fisheries Research Institute). These are but few examples of libraries which have endeavoured to computerize and get access to information from international databases.

The experience of ICRAF can perhaps illustrate further what the paper is trying to discuss. ICRAF has an in-house computer system. The institution has installed a set of microcomputers for use by the Information and Documentation staff. An in-house database has been created which currently contains 10,000 records with the capacity expected to rise. The records maintained are for material held in print or microfiche by the library. Basically, therefore this is ICRAF's catalogue online. In addition, the council acquired a compact disc system (CD-ROM): The disc is operational on the ICRAF computer system. This service is experimental and may be adopted if it proves successful.

ICRAF user group comprise of the institutional research staff and others within Kenya and other developing countries interested in Agroforestry. The requests may reach ICRAF by person, telephone or letter. On receipt of the requests the Documentalists then search the in-house computer for such material. If the document is held in print, microfiche or the disc, appropriate steps are taken to reproduce these in print and the document sent to the user. According to ICRAF most of their requests are satisfied this way[9]. ICRAF may also request an outsider to search international databases for them and send them a print out of the search request.

The question of charging users for online services has not arisen with ICRAF. Most users of this service have been able to enjoy free service despite the high cost of keeping the service going. The only users charged for the printout are those from developed countries. Otherwise, the council meets all the costs of online service.

ILRAD, another international research institute, has also installed microcomputers in its library and is planning to build an in-house database. The plan is to have laboratories connected to this database through their own terminals[10].

From the foregoing, it seems that in the context of this paper the online user group does not exist in Kenya. Much of the information retrieval from mechanized systems is basically offline. This does not however mean that online searches have not been carried out in Kenya.

In 1985, an Online Information Retrieval System was briefly installed at KMFRI. Some experts, apparently on some experimental basis brought with them a teletypewriter terminal which had a modem fitted to it. This allowed the searcher at KMFRI to connect to DIALOG through another computer in Brussels. Although this can be regarded as a complete online retrieval service, the KMFRI users did not get their search results back online. The print-outs of the search requests were printed in Brussels and the users received these by mail[11].

Apparently what led to the discontinuition of the service may have been costs. During the experimental stage the sponsoring company shouldered all the costs. The sponsors had hoped for some cooperative service which did not work out, hence the calling off of the demonstration.

Apart from the institutions mentioned so far, attempts have also been made at national level to computerize information services. National documentation centres like KADOC (Kenya Agricultural Documentation Centre) and KENSIDOC (Kenya Scientific Documentation Centre) have been created. Creation of these documentation centres also enhanced the creation of local databases which could later be linked with international services.

KADOC was established in 1978 with the intent to cater specifically for the interest of agriculturalists. It collects relevant agricultural

literature on Kenya, processes these and produces an abstract. Of late these have been microfilmed and stored in microfiche. KADOC had also acquired microcomputers and was therefore able to produce the 1981 (cumulative) edition of their abstract in computerized version. This abstract is held at the Government Computer Centre at the Bureau of Statistics. The data at the computer centre is basically for KADOC staff, who can have access to the computer through their micros and be able to update the data.

For users of KADOC the searches are usually manual. They go through the printed index and request for the document. The staff at KADOC library then verify the query and reproduce the material in print. The search request is then satisfied by a printed copy.

KADOC like the other libraries mentioned earlier conducts manual SDI (Selective Dissemination of Information) to some agriculturalists around the country. User profiles are held at the library and these can be matched with document profiles. Print-outs and photocopies are then made and mailed to respective users. This service is free to all users.

Another national documentation centre set up to facilitate dissemination of information is KENSIDOC (Kenya National Scientific Documentation Centre). KENSIDOC was established under the auspices of the National Council for Science and Technology. It was intended to be linked to other disciplinary national focal points. It was to guide, stimulate and conduct the development of information resources and services. It was to assume the role of a coordinator.

The documentation centres outlined above are still in existence, but one must confess that their effectiveness has not been felt by those in the information field. Perhaps their shortcomings have been prompted by lack of a national information policy. The development of a national information policy is perhaps crucial in establishing a national information system with a strong foundation. Where a national information policy preceeds the establishment of such centres

as KADOC and KENSIDOC, these would receive more backing from planners because they will have realized what they are supporting.

THE ONLINE USER GROUP

Having dwelt on systems that offer or may offer online services, the paper now turns to the online user as an essential user group in today's information world. The online user in a developing country is perhaps currently threatened by the following problems:

1) lack of local databases;
2) lack of effective telecommunication systems;
3) high cost of online retrieval systems;
4) numerous worldwide databases and their varying command languages.

Mentioned earlier is the fact that the computer market is already overflooded with computer vendors trying to market all sorts of hardware and software. It is therefore very easy to get confused in such a market particularly when one is obsessed by the 'Jones' syndrome. Nevertheless the warning should stand. Information systems considering online information services should take into account the problems listed above.

A number of these problems if not all can only be solved at the national level. These are issues which touch on national information policies. It is therefore essential that the development of a national information policy preceeds the establishment of a national information system. It is only then that priorities can be set and emphasis laid on the most important services.

Lack of local databases has been listed as one of the handicaps. Steps towards creation of such databases have however been outlined in the establishment of KADOC, KENSIDOC in the Kenyan perspective and PADIS and DEVSIS at the continental level. The availability of local databases would reduce the distances that separate the de-

veloping world from the databases in the developed world. Shortened distances would mean less cost online and hence increase in the use of online services.

Lack of a proper telecommunication system is not only connected with the advancement in technology, but greatly advanced by the distances mentioned earlier. In Kenya, for example, a very advanced telecommunication system exists through which users can easily communicate to the outside world through telex system. The only problem in the application of this service is the high cost involved. Because of this, the corporation concerned has not been able to make available dedicated lines which are necessary for online information retrieval from international databases.

The high cost of an online retrieval system has already been observed in the two problems outline above. Additionally, it could be looked at in terms of provision of a fee-based system. A situation where the user is requested to share in the cost of getting his/her information query answered through a mechanized system. This, unfortunately has been a question under debate not only in the developing countries, but even in the developed world where computers have invaded information services for decades.

Some critics of user charges have viewed this as a potential threat to the tradition of free library services, particularly in public libraries[12]. Saffady adds that imposition of user charges will deny access to information to those unable to afford the comparatively high costs associated with online searching.

Surely if charging for the service has been so much debated against in the developed countries where costs are so much subsidised, then what will the developing world do. The cost of computerizing alone will be so exorbitant that the institution doing so will have spent all the budget to complete the exercise. The cost of keeping the system running will however have to be subsidised by someone if not the users.

Lastly the online user in a developing country is faced with a multitude of databases to choose from. Making a decision on which database to search is in itself a problem leave alone getting a terminal that can connect one to a distant database. To be able to select the most appropriate database, the user must have adequate knowledge of the scope, coverage and quality of all available data bases covering his/her subject fields. According to Lancaster[13] he must also have the ability to match his knowledge of databases with his understanding of the request.

To solve the problem of databases in developing countries, Lancaster's[14] suggestion on referral centres might be ideal. Such a centre would be able to provide a listing of all databases according to the degree to which their characteristics match the preliminary inquiries. A user therefore would be saved the problem of having to search too many databases one after the other.

Coupled with the problem of choosing the right database is the problem of command language. Each online system seems to have its own language. This poses a problem for the searcher to be able to identify the best search strategy.

A user cannot work out an effective search strategy unless he/she is conversant with the command language. There are certain desirable features which command languages should have. These include:

1) Effectiveness;
2) Simplicitly;
3) Memorability.

Effectiveness is viewed in terms of recall and precision levels[15]. We must however remember that the user of the online service is handicapped by using terms that were used by an indexer whom he/she cannot consult at the time of the search. The online user when searching is actually dealing with a 'dumb' machine. A machine he/she is limited to interrogate. A machine that is somewhat unfriendly.

Secondly, command languages should be simple. This means easy keyboarding. Keying that avoids hashes, slashes and dashes can be considered simple. It should thus be easy to learn/handle by any user. Fenichel, C.H.[16] refers to 'menu-driven' systems as some of the simplest for any user. In a menu-driven system the searcher never gets lost, because the system ends each message with a question and a group of choices. This leads the user to the next step to make.

Thirdly, command languages should be memorable. This is essential for the occassional user. The user is saved the time to have to consult a database manual each time he/she wishes to conduct a search. Abbreviated formats are normally recommended as being memorable.

It would be ideal if there was a common command language for all databases. Although attempts have been made in Europe[17] this has unfortunately not been achieved. Most databases are commercial and business people by nature like keeping their secrets. Having their own unique command languages is one way of doing this.

EFFECTIVE ONLINE SERVICE

How then does an online user go about getting the best out of an online retrieval system? A few steps are crucial to this:

1. Request Form - In the first instance the user will approach an information centre and present his/her query. This should best be handled by completing a pre-designed request form.

2. Reference Interview - On receipt of the query, the information specialist (reference librarian) should study the query and conduct a normal reference interview - thus find out more from the end user/requester about the question. It is at this stage when a decision can be made whether manual search would be adequate to answer the query or an online search would be ideal.

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3. Selection of a Database - The third stage is to select the appropriate database.

4. Search Strategy - After the user has selected a database he/she now plans a search strategy. This can be done in conjunction with an information specialist or either of the two goes it alone. Search strategy should include all terms to be used and an indication of how they will be coordinated. Alternative search strategies may also be planned at this stage, so that if one does not yield the results, another is tried.

5. The Search - The user now plunges into the real search with an aim of taking the minimum time possible and yet producing the required recall with the right precision.

6. Evaluation - Most online users often forget this stage which is very crucial in finding out whether or not the searches are satisfactory. After each search, an evaluation of the search results should be undertaken. Measures used for this exercise often include the following:

- Recall - Relevant citations retrieval divided by all relevant citations in the database.
- Precision - Relevant citations retrieval divided by all citations retrieved.
- Unit cost - Relevant citations retrieved divided by search cost[18].

Lastly, it is advisable that an information centre engaging in online searches keeps record of all searches conducted. This will help in feed back and can even be used to answer other requests later on.

Apart from the steps outlined above which should lead to effective service to online users, one also recommends the following:

1) Knowing ones users and compiling user profiles;
2) Providing an offline SDI;

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3) Employing trained staff that can competently handle online services;

4) Training and re-training users and staff in matters related to online information retrieval. These could take the form of:
   a) formal training;
   b) demonstrations at the library;
   c) seminars;
   d) production and distribution of relevant bulletins for users.

CONCLUSION

Online information retrieval is relatively a new field in satisfying user needs. It has been slowly penetrating the information field in the developing world. As information technology gets accepted and adopted so have some aspects of online information retrieval.

This paper has therefore endeavoured to examine the online information user in the context of the new technology. Experiences have been drawn from the Kenyan scene, however, this does not mean that other developing countries have not done better. The reader is informed that some developing countries are far much ahead of others. Nigeria, for example, has been quoted as having several of its libraries connected by telex[19]. Similarly, developments in some countries of the East are much more advanced in this area. The University of Petroleum and Minerals Library in Saudi Arabia is recorded to be searching DIALOG files from terminals located in the library[20].

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EFFECTS OF LIBRARY AUTOMATION ON LIBRARY USERS

by M.A.W. Muiruri

INTRODUCTION

Library automation is a recent development and computers were first used in libraries in the 1960's in North America and United Kingdom. However, library automation is continuously and rapidly advancing, and its impact is being felt in both developed and developing countries. Use of computers in developing countries vary from country to country, depending on the level of economic development. The situation in Kenya is that only a few international libraries have ventured in library automation. Library automation has been discussed worldwide by many authors, among them local librarians. On the other hand, effects of automation on library staff and/or users have not received equal attention. The paper will discuss these effects (either positive or negative) and how they affect the library users.

Library automation has been, until recently, aimed mainly at technical services (cataloguing, acquisitions, serials control, circulation control) for the benefit of library staff. Although library users have indirectly received better services as a result of computerisation, it is in the following reader services areas that they have been directly affected: Circulation control, on-line catalogue, and information retrieval. Also affected is the general image of the library. Library automation enhances the general image of the library because an automated library is viewed as modern, progressive and efficient, which attracts users.

CIRCULATION CONTROL

Circulation Control is concerned with controlling use of all library materials in order to achieve maximum availability. Libraries have

different priorities, depending on the level of use of their materials and the urgency of the requests that they handle. In academic libraries for example, it is necessary to put some materials on short-loan, to maintain files of materials by: author/title/call number, name of borrower, and date on which the books are due in the library. Under the manual system, it is difficult in large libraries to maintain a desirable high level of efficiency. Library users wishing to know how many and which books they have borrowed or about the whereabouts of a particular book (whether or not it is issued) would find it difficult to get such information.

One of the reasons of automating circulation control systems is to improve and offer more services to users. For their benefit, an automated circulation control system is according to (Tedd 1984)[1] able to:

1) Issue and return materials rapidly and accurately;
2) Prepare overdue and recall notices;
3) Enable items to be reserved and to issue the necessary notice when a reserved item has been returned;
4) Inform individual borrowers of items on loan to them;
5) Calculate the necessary fines due at the point of return;
6) Check whether or not a potential borrower is eligible for service;
7) Detect overborrowing and 'problem' borrowers.

ONLINE CATALOGUE

An online catalogue is a system that allows the user to quickly and efficiently interrogate the computer-held catalogue files of a library or libraries. The online catalogue has had a dramatic effect on the away users use the catalogue. Users use such a catalogue in order to find out if the library holds a particular item of interest, and be informed of its location. Further, if the catalogue is linked to the circulation and acquisitions systems it is possible to know if an item is on loan or on order. For libraries that have several branches, or

different collections, the users will have only one place in which to search for materials, instead of having to consult several catalogues to be sure their search is complete. In addition, the online catalogue can be used from locations other than the library even when the library is closed.

The online catalogue is user oriented and (Rowley 1980)[2] describes it as the ultimate catalogue of the future. The emphasis is on providing easy access to catalogue record. Consequently, most systems provide more access points to catalogue records than a conventional card catalogue. In fact, the entire bibliographic record is accessible to users in some systems.

INFORMATION RETRIEVAL

Information retrieval is the process of locating documents or information that have been stored. Emphasis is now shifting to 'online searching' which refers to the use of a computer to retrieve information from databases. The international situation is that libraries are now increasingly using online systems to satify users bibliographic needs. Computer-based information retrieval is faster, more flexible, more comprehensive and the information up-to-date than traditional manual systems. Online information services in Kenya are severely restricted to business and government organisations e.g. banks, airlines, news agencies etc. because of high costs of online access.

A general effect of introducing online searching is an increased demand for documents. This will result in an increase in interlibrary loan requests as users wish to see relevant documents that are not available from library's own collection. Users are very satisfied to find that they can access extensive files very fast and within a few hours receive a list of useful references. However, it is frustrating to wait for these documents if they can only be obtained through inter library loan, which sometimes can be very slow and cumbersome.

EFFECTS OF CHARGING LIBRARY USERS FOR ONLINE SEARCHING

Whether to charge or not user fees for online searching is a controversial issue that will not be discussed here. If a library decides to charge user fees, there are certain implications for users. Charging would reduce demand for the service. In some instances, libraries charge a nominal fee simply to reduce demand and discourage misuse. Other effects of charging individuals are: discrimination against the poor, and research shows that users may reduce the time spent online (thereby reducing user fee) or perform briefer searches (Fenichel 1981)[3].

EDUCATION AND TRAINING OF USERS

One of the reasons for library automation is to improve user services. Therefore, it is very important that library users should be made aware of this fact. Availability of information explaining the new system together with detailed instructions of specific operations are beneficial, especially in areas where it directly affects them (online services and circulation control). This might include printed materials, audiovisual aids, demonstrations, or computer assisted instruction programs could be developed. The objectives and costs of implementing the new system should also be available to users.

With the advent of online services users will need professional assistance because they have not been trained in online searching. They cannot search online databases directly in an efficient manner because of unfamiliarity with the access language, the complexities and inconsistencies in the structure of the databases, and search strategies (Kent 1978)[5]. As a result, there is need for an intermediary because the search system is not sufficiently user oriented. The success of the assisted search will depend on the ability of the users to describe their information needs. Since not all users can describe their information needs in precise language, the need for more user friendly systems have been acknowledged.

DE-HUMANISATION OF RELATIONSHIPS BETWEEN LIBRARY STAFF AND USERS

According to (Loughridge 1979)[4] computerisation leads to de-humanization and depersonalization of work. He argues that computerisation leads to de-humanization of relationships both within the library and between the library staff and users. His argument in the case of a computerised circulation control system is that relations between staff and readers deteriorate, in the sense that the library becomes a system for transmitting standardized computer-generated messages to users. These messages (whether recall or overdue notices) are in a form conditioned not by the users requirements but by the systems designers. Loughridge further suggests that any communication not made possible by the system is neglected or ignored.

This paper has discussed some of the effects of library automation on users. Library automation is bringing about a period of rapid change and development which will affect library use and users. The trend is likely to continue and could be the way information will be handled in the future. It is very important for us librarians to keep abreast with technological developments which have and will continue to revolutionize information handling.

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THE ROLE OF A SCHOOL LIBRARY AND ITS APPLICABILITY IN DEVELOPING COUNTRIES: THE CASE FOR KENYA

by J.N. Otike

The importance of a school library in a school community can not be disputed. The library exists as a major support service which a school programme cannot do without. A teacher however well versed he may be in his speciality is least able to meet all that is stipulated in the school curriculum. The result is that much of the knowledge has to be obtained from other sources. The teacher cannot prepare his teaching lessons and conduct research programmes successfully without the library. Pupils too, need to further their learning programmes beyond the classroom boundaries. To realize this, both groups need not only a comprehensive library collection representative of the needs of a cross-section of users, but also the services of qualified library staff to meet their growing and varying needs. The above and other arguments have come to accord the library a central role in a school programme. It is however interesting to note that although authorities in the developed countries such as the United States and Australia have a high regard for school libraries, the situation is far different in the Third World and Kenya is no exception to this.

INTRODUCTION

A school library has been defined differently by various people under varying situations. Some writers particularly teachers have come to define a school library as a place housing a book collection which students visit to interact with the material. Others view it as a quiet place in a school where students go to pursue individual study. A school library in the real sense can be defined as a learning centre in a school where students and teachers alike further their educational programmes. For this objective to be fully met, the school library must not only maintain a comprehensive and up to date

collection, but must also have an organized collection that is appropriate to the needs of the entire school population.

A school library does therefore bring together four main elements: (1) the resources, (2) the users who are students and teaching staff, (3) the library staff, and (4) the environment. The resources of a school library comprise both the printed materials in the form of books and periodicals as well as non-book media such as audio-visuals eg. television sets, films, tape recorders, film projectors, sound equipment, radios, microfilm, microfiche and their readers. The users comprise mainly the students and teaching staff of that particular institution. In some countries particularly the developed, the use of a school library is extended to parents and people from the neighbouring communities. In the case of a boarding school in a developing country, this may include families of members of the institution's staff. In an attempt to provide a proper and effective service, the school library must be properly organized under the direction of a professional librarian. It is only a professional librarian who can interpret the objectives of a school into reality. He is the person who holds the ultimate success of a school library. Lastly, the three elements must be placed in an ideal environment that is conducive to free interaction between the users, the staff and the resources.

The school library must exist as part and parcel of the school programme. Its aim should be to further the objectives of the school. To do this, the staff of the library must understand fully the aims and aspirations of the school they are serving.

THE ROLE OF A SCHOOL LIBRARY IN AN IDEAL SITUATION

Generally, the users of a school library determine the role of that particular library. A school library exists to meet the needs of the school maintaining it. A school comprises the teachers, students and in some instances, non-academic staff. On some occasions users of other school libraries are bound to find access to the collection of a

school library as part of inter - library co-operation. This practice is to be encouraged among schools as school libraries are not bound to be fully exhaustive in all areas of their coverage. The role of a school library can be described as follows:

1. To support the learning programmes

The school library is supposed to support the school curriculum by providing relevant materials to assist students in their learning programmes. Current trends in school education have shown remarkable changes. The teacher is no longer the central figure in the educational process. Emphasis is now being placed on the pupils. The teacher is only supposed to guide the pupil in his endeavour to learn. On this subject Umbima[1] has the following to say: "School education is designed to enable pupils to learn how to learn. It would be unrealistic to expect pupils to learn all there is to learn within a few years of schooling. The supreme ideal in education is individualized learning. There is no better back-up tool for this situation than a good school library. The teacher merely acts as a guide and not an imparter of knowledge."

Since the school curriculum gives more emphasis on individualized learning than teaching, the school library has come to occupy a central position in the school. In order to make this possible, the school library is compelled to acquire comprehensive and up to date materials in all areas covered by the school curriculum. The collection must comprise both printed and non-printed materials.

2. To act as an information centre

In addition to individualized learning, pupils would also expect the library to avail them materials and services for their general information. They expect to be kept abreast of all developments pertaining to current affairs, careers, sports and other areas of interest. In so doing, the school library acts as an information centre. To perform this function very effectively, the library will have to maintain an effective current awareness programme.

3. To provide recreation

Among other functions, the library is supposed to support recreation. It is important to promote the use of library materials in connection with recreation because:

- The use of the library can result in pleasurable experiences and relaxation;
- Reading, listening and viewing skills can be practiced and developed;
- A grasp of the language and its use can be gained;
- Imagination can be exercised and developed;
- Access is provided to one's culture;
- Knowledge can be extended;
- Time can be fruitfully filled;
- Valuable vicarious experience can be provided.

The use of the library and its resources will stimulate reading. Reading should not be confined only to passing examinations. Rather, it should be developed as a lifetime hobby. It should be able to continue even when the student has achieved his ambition. In order to make this possible recreational use of the library should be started right from the beginning in a primary or pre-primary school. To achieve this, there is need for a school library to provide materials which appeal to pupils. This would involve a wide range of materials starting from travels and adventures at one end, to fiction at the other end. Teachers and librarians should not simply blame pupils for not using the library. Rather they should endeavour to find out why pupils do not use the library. The problem may lie with the provision of materials which may not be appealing. It is not only the provision of materials that may be the hindrance. The library will also have to institute an effective user education programme. The pupils' interest in the library has to be stimulated and there is simply no better solution than user education.

4. To support the teaching programmes

A school library has also to support the teaching programmes running at the school. Teachers need materials to assist them in preparing lessons. The lessons are based on the school's curriculum. The library has to support this function by acquiring and providing relevant materials to assist in this direction. The materials required may vary from textbooks, atlases, wallcharts at one end, to the provision of audiovisual materials such as films, tapes and computer programmes.

In an attempt to meet the teaching role, the school library will have to be kept fully abreast of all changes taking place in the school curriculum. To do this, the library will have to be represented in all crucial meetings pertaining to school programmes. There will also be a need for teachers to maintain constant liaison with library personnel in an attempt to keep them fully aware of the teachers' needs so that the staff can endeavour to procure and organize the resources before the lessons are prepared. As libraries cannot claim to be fully selfsufficient in all areas of their coverage, some programmes may perhaps require the acquisition of materials from other libraries on interlibrary loan basis. Such co-operation between the two parties would ensure that this is done.

5. To support research programmes

School authorities particularly in developed countries are constantly revising their teaching programmes to ensure that they are in line with changing trends. Unlike in developing countries where teachers base their teachings from prescribed textbooks, teachers in the developed world do not necessarily take in all what is highlighted in school textbooks. Teachers are constantly involved with research programmes and through these, new information is coming to light pertaining to the school curriculum.

However, the success of this programme would greatly depend on the lavishness of the resources in the school library. The school library

will be required to play a leading role in this direction by providing facilities conducive to research.

6. To support professional development

The quality of teaching in any school does not only reflect on the quality of teaching materials available in the school, but also on the professional qualifications of teachers. In order to impress on the quality of teaching therefore, there is a need to improve the professional qualities of the teachers concerned. The "talk and chalk" principles which were prevalent in Europe at the beginning of the century for instance, have been replaced by individualized learning where the learner is the centre of activities. This does therefore call for changing trends in teaching. But not all teachers have the time to attend inservice programmes during their spare time.

Teachers will therefore rely heavily on the services of the library for their professional development. To make this possible, the school library will have to maintain a relevant and comprehensive collection of materials on education. The collection will need to be regularly updated to reflect changing trends in education.

In addition to materials on education, the school library will be required to assist teachers who aspire to improve on their academic qualifications. This would not only mean providing materials to meet the academic interests of the pupils, but also maintaining an academic collection for teachers. A school library schould not be seen only as meeting the interests of pupils. Rather it should be representative of the interests of the entire school communitiy.

7. To maintain a current awareness programme

In addition, the school library is required to run current awareness service. This is where the pupils and teachers will turn to on all issues pertaining to currency of information. Above all, the library will have to maintain a record of teachers' profiles so that any in-

formation received on a teacher's speciality is immediately brought to his attention.

Above all, a school library is supposed to evaluate its services from time to time to ensure that they respond to the needs of the users. As a school library exists to further the objectives of the school which maintains it, it is proper that its operations are well in line with the aims and aspirations of the parent body. To do this, the library staff needs to obtain constant feedback from the users on the suitability of the existing services. This information can be obtained by way of a library survey by sending out questionnaires to users. It can also be done by interviews or by failure analysis. Any of these methods is bound to reveal some weaknesses in the library service which in the long run can save the school a lot of money and time.

School libraries like other libraries should be run on scientific lines. Their services should be able to justify the funds spent on them. The only way to do this, is to evaluate their services by measuring the performance against objectives.

THE SITUATION IN KENYA

The position of a school library in Kenya is far different from that of a school library in developed countries. The fact here is that a school library is not given as much recognition as it is in developed countries. The problem is further compounded by the fact that the Government does not have any policy on school libraries. The fate of school libraries is therefore put at the mercy of the headteachers. Since the development of school libraries in Kenya greatly depends on the enthusiasm of the headteachers, school libraries in the country are of varying sizes and organization. It however appears that the Government is slowly realizing the value of school libraries, a development which is taking quite sometime to reach fruition as first evidenced by Maleche[2]: "At present, there is no specific Government policy on school libraries. Schools are not required to establish and

develop libraries. It is left to the initiative of headmasters and headmistresses to use funds out of equipment votes to start and maintain school libraries."

In support of the fact that the Government is realizing the value of school libraries, Mulaha[3] has this to say: "It is a requirement that every institution in the Ministry of Education, Science and Technology, should provide adequate library services at secondary school level."

The above observation is supported by Kinyanjui[4] although the amount made available for library development here is very minimal: "At the moment the Ministry of Education, Science and Technology spends a sizeable portion of its annual budget on initial grant for schools, tuition and boarding facilities. For instance, the Ministry pays k 100 per class for new classes and k 250 for initial science equipment. However, inspite of this and other constraints as the Ministry recognizes the importance of libraries in schools, it spares a library allowance of k 20 per class for ordinary level classes and k 50 for 'A' level classes. Because this amount is not adequate to furnish libraries, the development of libraries has been left to the initiative and discretion of the various schools."

In addition to the above considerations, the quality of library service is also dependent on the type of school it is serving. Primary schools have generally inadequate provision for libraries as compared to secondary schools. As for secondary schools, differences are bound to occur depending on the nature of their funders. Government-maintained schools, particularly the old established schools, have by far superior collections as compared to harambee (self-help) schools. Harambee schools on account of the uncertainty of their funds, have poor library collections. A few private schools particularly those run by international communities such as the International School of Kenya, Strathmore College, Hillcrest School, Braeburn's School, St. Austin's Academy have sizeable collections organized by para-professional staff. The majority of private schools particulary those run as commercial enterprises generally offer the poorest

quality of education. Such schools have hardly any libraries. Among government schools with established libraries are Kenya High School, State House Road Girls' School, Alliance High Schools, Kabarak High School, Limuru Girls' School, Moi Forces Academy and Nairobi School.

THE ROLE OF SCHOOL LIBRARIES IN KENYA

An ideal school library in Kenya may perform only a maximum of three functions. These can be categorized as supporting recreation, learning and teaching. Recreation is probably the most popular function that school libraries do. The collection used for this purpose consists mainly of materials donated either by teachers, parents, friends or publishers and booksellers. The majority of books donated by parents and pupils comprise titles which have since been outdated. On the other hand, those donated by publishers and their agencies consist of materials which have failed to sell. The majority of libraries in harambee schools perform only this role.

Some school libraries perform more than one role. Schools maintained on Government funds have fairly stocked libraries. Such libraries go beyond the recreation function to incorporate further learning. Much of the materials used for this function is purchased by the school authority using Government funds or funds raised by the school board for this purpose which may include harambee funds. Few libraries have the facilities to support a third function, the teaching role. A few of these comprise old Government schools particularly high cost schools formerly earmarked for the education of white pupils. A good example is Kenya High School. Some private schools particularly those run by religious bodies and foreign embassies also have the facilities to meet this role. A few of these are Strathmore College and the International School of Kenya.

FACTORS RESPONSIBLE FOR POOR PERFORMANCE

A number of factors have posed a serious threat to the development of school libraries in the country. Among these are:

1. Lack of a school library policy

As stated earlier, the Government has not formulated any policy on school libraries. Although it is a requirement by the ministry responsible that an institution should have a library, it does not amount to a policy statement as Mulaha[5] observes: "the Ministry of Education, Science and Technology has never shut down a school for non-provision of library facilities."

The absence of a policy means the absence of standards for libraries in schools. So far school authorities are not fully aware what role a school library should play. There is no guidance on what constitutes an ideal library. In the absence of this, headteachers maintain different views on school libraries based wholly on their own perceptions.

2. Lack of recognition

Another hindrance is the lack of recognition of the library as an indispensable service by teachers and educational planners. Teachers do not consider the library as a medium which can further learning and teaching programmes. On the contrary, they regard a school library as a reading room where students visit occasionally for independent reading. As the development of school libraries is dependent on individual headteachers, lack of recognition means negative development of library services in schools concerned.

3. Insufficient funds

The funds set aside by the Government in any one year is too insignificant to cause any impact. Yet the Government cannot exceed the ceiling because of financial constraints as the Director of Edu-

cation admits: "If the Government had to set up a reasonable library in every educational institution, it would not be possible to provide all material that is needed. Kenya has about 13.000 primary schools, 3.000 secondary schools, 5 colleges of Diploma, 22 primary teachers colleges, 11 colleges of technology, and 3 polytechnics. That is about 16.000 in total."

4. Lack of qualified personnel

Lack of fully qualified library staff in schools has to a great extent affected the development of school libraries. In the developed world, school libraries are manned by professional librarians because it is only trained librarians that hold the success of any school library. However, this cannot be applied in Kenya as the salaries for professional librarians are far beyond the financial reach of boards of governors.

Some librarians in Kenya enjoy salaries equivalent to headteachers. The alternative has been to employ the services of para-professionals or library assistants. Even here, only a few schools can manage. The tendency has been either to employ the services of a library clerk who in most cases is an 'O' level holder or to put the library under the charge of a teacher.

RECOMMENDATIONS

In an attempt to improve library facilities in schools, the undermentioned proposals are made:

a) The Government should formulate a school library policy. The current negotiation going on between the Ministry of Education, Science and Technology, Kenya Library Association, Ministry of Culture and Social Services and KNLS to work out a scheme for a school library service[7] should comprise part of this policy.

b) School libaries should be accorded sufficient recognition. Among the ways of doing this, is by way of regular seminars, conferences, workshops to be hosted by the Kenya Library Association in which teachers, senior personnel from the Ministry of Education Science and Technology are to be invited to participate.

c) A school library service should be established to supplement the effort of headteachers.

SUMMARY

This article has proposed a definition for school libaries. The role of a school library in an ideal situation as it pertains in the developed world has been examined. It has been noted that while a school library occupies a central position in the developed countries, its role is not considered vital in the Third World. Although the authorities in Kenya for instance have come to realize the importance of a school library, no positive steps have been taken to put this into practice. The future of school libraries therefore still remains in the hands of the headteachers. The article has gone into greater length to explain why the library situation in Kenya is what it is presently. Some solutions have been proposed which if implemented, could help to reverse the situation.

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HOW NON-BOOK MATERIALS CAN ENHANCE USER EDUCATION

by. M.N. Mathu

User education can simply be defined as that process which enables the library user to be knowledgeable of the library's role, its responsibilities and its contents. It also involves teaching patrons in study skills. The subject of user education needs greater attention at this age when libraries are becoming a part of the information industry. Hence learning to retrieve information from libraries is just not enough. Users need to learn how to organise, evaluate and communicate that information.

The need for user education is well stated in the Unesco guide: "Education and Training of Users of Scientific and Technical Information", UNISIST Guide for Teachers, Paris: Unesco by A.J. Evans, R.G. Rhodes and S. Keenan. It states that: "Users of information are an integral part of and the final link in the information transfer chain, they are the 'raison d'être' of every investment made for bettering the storage, processing and retrieval of information. In every country from the least developed to the most advanced, a certain amount of scientific and technological information locally produced or of international origin is processed and stored in some fashion for the benefit of users. Unless these users know how to find relevant information available to them, the information 'Machinery' falls short of its main goal."[1]

The impact of this statement is that both developed and developing countries have paid a lot of attention on educating library users by encouraging them to make the fullest use of a particular library, its resources, services etc. thus laying a basis for more effective library use in future.

The methods employed in user education programmes differ with countries and institutions. However the goals and the objectives of such programmes remain the same - namely:

a) To improve the user's ability to use library resources and services effectively to meet their information needs;

b) To instil realistic attitudes and expectations concerning the library and is accessibility.

It is within these goals that important decisions concerning content and form of presentation of user-education programmes are made. At the same time such programmes should have longterm life - oriented objectives.

In the world over today, the present state of libraries and user education programmes reflect the financial constraints, social changes and developments in educational practice which affect their parent institutions. For example in many academic libraries increasing demands are being made on the library service by a reduction of the ratio of staff to students due to financial constraints. User education thus becomes an extra service on the overburdened librarian who eventually loses his enthusiasm when the work load becomes too heavy.

Though this problem is crucial especially in developing countries, user education should be given a high priority especially in academic libraries. This is because in such countries and for example Kenya, very few students are exposed to library services in their school days. The only school leavers familiar with libraries are those from urban areas like Nairobi who have libraries in their schools or who make use of public libraries there. Therefore as freshmen in the University they need considerable help in finding their way round the library, how to use the card catalogue or look up a reference in the catalogue. They may have difficulties finding materials in the shelves, and they know very little about bibliographic services. In other words the newcomers at the University have very little knowledge on the basic mechanics of library use. Such students need to be educated on how to use the library so as to exploit its resources and to understand the pattern of communications and how to organise efficiently their methods of information retrieval. This is the only

way the students can be able to cope with the overwhelming masses of information.

Amongst the various things to be considered in order to achieve the goals and objectives of user education, the choice of media to be used is crucial. Whether it is during library orientation when the students learn about general use of the library or during the library instruction when they learn the information retrieval skills the use of Non - Book Media cannot be ruled out.

The traditional method of user education have mainly included a guided tour of small groups of students round the library with brief explanations on the collection with the librarian answering the student's questions. Instructions are given on how to use the library catalogue, indexes, abstracting services and sometimes citation indexes for higher award students. The brevity of such gluded tours is explained by Njuguma: "Orientation lasting a few hours has in the past been the only form of library education university students in Kenya have had during their university life."[2]

It is then doubtful how much one can learn from such brief tours in terms of how to use the library resources effectively when there is so much to learn. The library user needs to know more than where the reference books are kept, what is a catalogue etc., things he can find out for himself by looking at the library map, or overhead signs or by asking his collegues. The new user needs to know how to search for relevant information from the many sources available and be able to organise it in a useful way. Such knowledge is helpful because students can only find libraries easy and enjoyable to use when they are familiar with library materials, when they know whom to ask for assistance and when they realise that use of the library is specifically related to their academic success.

Brief lectures and guided tours are ineffective in terms of the information they convey to the students. They are also time consuming because the librarian has to repeat the same things to the various groups involved. They can also be very boring.

During recent years there has been increasing interest in the use of non - book media (NBM) for conducting user education programmes. This is not only because of the wide range of the many readily available in the market and suitable for the purpose, but also because the NBM make learning more interesting. NBM is also effective in terms of conveying the information due to its combined audio and visual capacities. It is also economical in terms of times, money and staff.

Already there is some concern and fears in some developed countries that librarians could be spending too much of their time on user education programmes at the expense of giving direct help to their institution's staff and students[3]. The use of NBM in user education programmes would no doubt alleviate such fears due to the various savings already discussed.

Experiments so far conducted on the advantages of NBM over the traditional methods in user education programmes have so far proved to be quite positive. Wendt, Rust and McCoy showed that well designed units of programmed instruction which involve simulation of desired terminal behaviours by means of pictorial instruction and occassional completion of performance assignments, can teach without reliance upon an human instructor as well as or more effectively than can traditional orientation lectures which involve valuable staff time[4].

In another experiment at the University of California, Irvine, an evaluation was done using an experimental design and statistics with two library instructional videotapes. The results showed that viewing the two videotapes significantly improved students knowledge of library utilization skills[5].

Such experiments rule out any doubts raised over the comparative effectiveness of mechanical over more traditional methods of library instruction. The former no doubt have potentially greater attractiveness over the latter.

The effectiveness of NBM in learning situations for the individuals or groups of people need not be emphasised in the modern world. It is already proved that different people have different learning abilities. Some learn better by seeing, others by hearing and yet others by reading etc. Therefore librarians should provide a wide range of media to convey user education programmes which in turn should be tied up closely with the specific needs of students and their various levels of ability.

The choice of NBM range from films, tape slides, audio tapes, overhead transparencies, televisions, to maps, charts, photographs etc. The media selected for user instructions should be:

- The most effective for learner achievement;
- Involve the learner intimately;
- Accommodate group interests;
- Accommodate the ability and limitations of the learner.

The choice of the method and medium of instruction should be dictated by other things like teaching/learning situation, the subject matter, the teachers, the students besides the expenses. No single method or medium would be suitable for all occassions, a combination of all would be most effective.

The tape slide is one of the media being increasingly used in libray instruction in many academic libraries today. It consists of colour slides synchronised with tape which is particularly useful for showing non - movable images like content pages of books and magazines.

In library instructions it is most effective for teaching new users on how to use indexes, abstracts, catalogues etc. Traditional method of giving instructions in literature use involves lecture presentations, based on information contained in the text and followed by assignments of library problems, aimed at providing students with actual experience in locating information in the library. This method no doubt lack visual images which is a vital factor for effective under-

standing on the part of the learner. Supplementing such lectures with the use of tape slides would increase the learners capacity to know what is being talked about because the actual picture of the subject eg. a catalogue can be viewed on the slide.

It takes a few hundred words to explain what is a classified catalogue while a single slide would tell the reader the same thing. Hence the wise saying "a picturer is worth more than a thousand words." Therefore the tape slide as a method of instruction has several advantages for both the users and the library staff. First its flexibility allow it to be used for both group and individual instruction. It is also readily available which makes it possible for the user to undertake self - instructions anytime even in the absence of the librarian. It is also easy to handle and to operate. All these advantages enhance the user education programme in that the user can use the tape slide repeatedly until he fully understands the subject.

Transparencies projected with an overhead projector can also be useful in showing specific areas of a library handbook, or circulation cards or date - due slips. It has the advantage in that it is possible to illustrate to an entire class actual work involved in any library activity. Lectures employing transparencies usually result in a high level of learning.

From these discussions it is obvious that NBM can enhance user education programmes by supplementing and reinforcing the lecture method of instruction, especially with visual presentation. For example during the guided tour, most libraries issue printed guides in the form of small pamplets, booklets etc. of the services they offer. A motion film or video recording showing how a book is borrowed, how to use a catalogue, the kind of information found in the reference section, how to use periodical indexes etc. is a useful reinforcement to such guides. The films cover the same subject in a shorter time and even in greater details showing moving images which create visual impression on the minds of the user. The film no doubt is preferable to verbal explanation in a library situation the students know nothing about.

Where it involves a large group of students an introductory talk on the use of library can be presented on closed circuit television (CCTV). This is concerned with sending sound pictures over "private" systems to a limited selected audience. Brown says that: "Closed circuit television lectures on the history of libraries, the Dewey and Library of Congress Classification Systems, reference books and periodicals and on research problems were very successful[6]. "He notes that despite the limitations the television poses in that the users do not interact with it directly, the same amount of information is communicated with less effort.

By means of television, the closed-up presentation of catalogue cards, book numbers, issue methods etc. could be effectively explained to the students. This would have the advantage over the mass lecture in that the librarian does not have to keep on repeating the same thing to the various different groups. By means of a CCTV a dramatised version of library procedures could be presented with the librarian giving a recorded commentary of each step involved. For example a well planned CCTV programme would start off with a few shots of interesting features of the building to be followed by a detailed tour of the shelves showing each subject section and the commentary would explain briefly about the classification number, shelf order and finally demonstrate how to locate a book through author and subject catalogue.

The use of a CCTV programme is effective for library instruction aimed at teaching the new user the "language" of the library. By this means, systems of symbols, abbreviations, author, title, subjects, indexes etc. can be explained/shown to the new library patron. There is no doubt, all these kinds of instructions can be presented verbally, but the use of visual presentation would enhance greater understanding and facilitate memory.

On similar lines with the CCTV a video recording on ordinary television seems to be the one form of communication technology which has won favour and recognition in the field of library orientation especially in developed countries. It has proved to be as effective as

traditional lectures. The TV is also important for group work and helps in providing sensory experiences. It shows an incident as it occurs or occured especially if a video tape is used. It goes further in substituting for real life experiences by providing three dimensional materials and close-ups of minute objects to a larger group. The TV also enable students to develop self-reliance and self-satisfaction making the users less reliant on busy librarians and thus become less frustrated. The TV also gives self-satisfaction in the learner's approach to learning and pursuit of knowledge.

The computer assisted instruction especially the microcomputer, is increasingly being used in library education programmes in many academic libraries. This method provides the ultimate individualised teaching instruction. The computer stores a variety of programmed instructions which vary in the contents presented. The computer has the advantage in that it can provide for both fast and slow learners, it can provide for individuals who need higher percentage of pictorial instruction, it also provides for students from different social and economic levels. The computer can also adjust to students by keeping records of students failure or success and adjust the programmes accordingly without the knowledge of the students.

An instruction method of this kind would no doubt give a new library user a better chance to learn more effectively because the method allows him to study and learn new things at his own pace. From these discussions the importance of NBM in supplementing traditional methods of library education cannot be unterrated. NBM has the benefit of achieving a balance between words and pictures which is vital for effective learning.

In Kenya just like in many developing countries, some of these sophisticated media might not be applied for user education programmes for sometime to come due to financial constraints as well as lack of experienced staff in their production and use. All the same, librarians and users should change their attitude not only towards user education as a necessity in libraries but also towards the NBM and the important role they can play in conveying information in any

learning situation. The librarians in developing countries could still select some of the less expensive media like slides, transparencies, pictures, charts, maps etc. and make use of them in user instruction. This would not only help increase the user's knowledge on exploiting the library resources but it would make user education more attractive and interesting.

The problems of user education i.e. course content, integration into the curriculum, evaluation media etc. still need to be researched on. This should be done within the context of our economic contraints and social changes facing our parent institutions.

In conclusion it is obvious that the volume and complexity of the information being generated is increasing daily. Users of this information need to understand the patterns of information generation and communication. They also need to know the various methods of retrieving such information effectively and efficiently. To develop this capability the users need to be provided with a variety of tools to assist them.

Audio visual material is useful in information retrieval and research by fulfilling the need for sound and image. It is an appropriate method of instruction for the entire society whether visually handicapped, deaf or mentally handicapped. It gives speedy and effective instructions which is an advantage to the library in that it will assist in coping with the increasing number of new students each year.

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USER STUDIES: HOW TO IDENTIFY POTENTIAL AND ACTUAL USER NEEDS

by K.J. Mchombu

INTRODUCTION

This is a discussion paper whose objective is to explore some key problems and issues in the teaching of Identification of User Information Needs to Information professionals. This exploration is carried out not only within the context of harmonization of education and training of all Information Professionals but also the level of social development as the main determinant of manpower training needs.

Some tentative practical recommendations are then offered based on the situation analysis - largely as it pertains to Developing Countries. The suggestions are offered purely to serve as an illustration of one possible way of translating the issues, problems, possibilities, and challenges to a practical teaching programme rather than serve as a universalistic prescription to suit all situations.

SOCIALLY RELEVANT COMPETENCIES

The needs for Information manpower in a country, for which the curricula is the main implementation instrument, in my view, are determined by the social development requirements of a particular society, at a particular historical time in its social, political, economic, industrial and technological development.

Neelameghan (1979) suggests that there is an inbuilt element of instability even in prioritizing development and determining indicators, because the priorities of development differ from one society to the next, and the priorities may differ within the same country, within the same time frame.

It seems, therefore, that while a scenario of rapid change is clearly visible within all social groups - in culture, economics, technological innovations & adaptations - to determine what training and education is relevant to the needs of a particular society (and sub-societies) at a particular time in its development is a much more complex and difficult proposition. In the context of an underdeveloped society, what was socially irrelevant in 1965 might have become socially relevant by 1975; and possibly no longer relevant by 1987.

It is my hope that we can agree that in the planning and excuting of curricula for Information Professionals the broad aim should be the production of information personnel with socially relevant competencies who can make a contribution to social economic development through their information management skills.

Personally, I view curricula in functional and utilitarian terms, and the success of any information manpower training programme is best assessed from the end - results in terms of the impact of the information personnel in accelerating the pace of innovation in the country, increasing the utilization of information to achieve excellence in: education, management of institutions, research and development, economic development, industrial development, wiping out illiteracy, etc. In short, this is a group of professionals who should carry out the effective monitoring of the creation, flow, use, and results of use of information by all stratas in society as well as operating specific information providing institutions.

PRESENT STATUS OF USER INFORMATION NEEDS IN CURRICULA

To what extent does User Information Needs feature as a distinct part of the curricula in the different types of Education and Training programmes for Information Professionals? Armed with this question I scanned a number of curricula belonging to Library, Archival, and Information Science Schools (Unesco, 1972).

My impressions, which I can in no way offer as hard evidence, because of the lack of both specific details of curricula of schools other than my own, is that in the majority of cases user needs is not regarded as a full subject in its own right with the same status as for example, the traditional subject areas of Reference Work, Library administration, Cataloguing, Classification, Indexing, Archival administration, etc. However although my conclusion is that User Needs as a subject has low status in most of the curricula observed, it did appear to me that User Information Needs as concept permeates to a very considerable albeit lopsided extent of a major part of the content of the curricula.

In this sense, the subject of User Information Needs appears to be regarded as a background factor to what is being taught in the schools, rather that a central concern of the curricula. In the instances where User Information Needs was specifically mentioned a number of tendencies were noticeable: one such tendency is to deal with the problems of a specific group of users in the utilization of Information Services, e.g. children and young people, students, industrialists etc. It is more than unplied that the problem lies with the Users rather than with the way the information system operates.

A second tendency was to handle User Information Needs as a means of achieving a more important end – result: reading interests and bookselection, reader instruction and library use etc. A third alternative was to treat User Needs as synonymous with Reader Services.

In looking at the handling of the subject identification of User Information Needs by East European Schools and to some extent Scandinavian Schools they tended to see the Users as a subject worthy of study in its own right with topics like psychology of the user, sociology and information uses, reader guidance, frequently appearing in the curricula.

INFORMATION SYSTEM OPERATION PARAMETERS

In order to visualize clearly how the subject under discussion may feature in the curricula and its weighting it is helpful to 'see' such a curriculum in its totality. Keren (1975) has identified three Information System Operation Parameters, to which I will top up with two to make a total of five which are basic requisite knowledge areas for the successful operation of information systems:

1) Information Users;
2) Analysis and the Organisation of the Information contents;
3) Supply and delivery of Information Services and Products;
4) Sources of Information;
5) Planning and Management of Information Institutions.

I take these broad parameters as representing knowledge and skill areas in which intending information professionals must be conversant if they are to operate any type of information system successfully be it in Archives, Libraries or Documentation Centres. It seems easier to argue that an understanding of our Information Users is one of the key parameters to the successful operation of most information systems than to agree whether the studying of User Information Needs should be a critical component of the curricula for information professionals. A number of questions have to be asked: How and where should this subject feature in the curriculum, if at all? What should be its weighting versus other courses? What should its content be? Is there enough content to make a full course?

Questions such as these, and others of a similar nature seem to highlight the fact that there are a number of constraints within which the status of User Information Needs in the curricula has to be determined.

Certainly one such constraint is a historical legacy one - dramatized by the fact that over the years both the practice and education of information workers has found it easier to index and classify documents than classify Users. In the context of an information insti-

tution documents are passive and can be acted upon without reacting, hence the preference of information services to manage documents rather than Users. The volume of literature on various aspects of the handling of documents is tremendous - the sheer force of this volume of literature tends to justify the inclusion of such topics - part of the reasoning being that if so much has been written on the subject then it must be important.

In the context of underdeveloped countries there are yet two other constraints. One is the possible lack of teachers who are knowledgeable and experienced sufficiently to handle this particular course. Quite often the allegation that there isn't enough content to make up a complete course out of Identification of User Information Needs is, in my view, a betrayal of the shortage of knowledge about the different aspects of this subject. The easy access to relevant textbooks and newly published literature to provide a solid back up to lectures, discussions, project assignments, and individual student reading is often a major problem. It is not unusual to find in some schools that the most up to date literature is ten years out of date.

The few constraints mentioned above, which are by no means exhaustive, help to explain the low status of the subject in most of the curricula of information professionals in developing countries.

The central point of this paper is that the subject 'Identification of User Information Needs' has enough content to make up a course on its own. In practical terms this will depend, partly, on how courses are structured in a University. In situations where courses are structured in a modular format and each module lasting for one or two semesters, the studying/teaching of User Information Needs should present few problems. If however individual courses are structured to last for two academic years, or more, then the teaching of User Information Needs as an independent course may not be viable.

COURSE OBJECTIVES

The objectives of the course need to be carefully worked out because they will determine the specific content, and the time devoted to different sections of the course. The objectives will also have to reflect the level of knowledge and skills of the students, and the lecturers. Generally, at lower levels of education and training the course objectives should emphasize awareness, general knowledge and practical implementation. At higher levels of education and training, objectives should aim for detailed knowledge, ability to design and carry out User Needs Assessment Projects, and the ability to translate these findings to improved delivery of information services and products (Menou, 1979).

The course objectives at the different levels of training could be stated as follows:

Basic level:

1) To enable participants to be aware of the different User groups served by information units;
2) To give participants general knowledge of the major attributes which influence need and use of information;
3) To increase the sensitivity of participants to User Information Needs and how these determine services rendered.

Middle level:

1) Provide participants with adequate training to determine the information needs of different User groups;
2) Provide participants with the ability to adopt existing information services and products to suit particular User Needs;
3) Provide the participants with the ability to maintain dialogue with different User groups to monitor their changing needs.

Advanced Level: 1) Provide participants with skills for setting up and operating mechanisms for discovering User Information Needs;

2) To provide participants with knowledge of various methods and approaches which have been used to identify User Information Needs;

3) To provide participants with awareness of the role of User Information Needs in determing the setting up and operation of information systems.

Course Content

The course content described here is pitched at degree and post-graduate level courses but it may be utilized for lower courses with suitable adaptation.

1. Introduction

This part would deal with definitions of information, User Needs, wants, demands, and the concept of information value. It would also include the importance of understanding User Needs and provide an overview of information needs and national development.

2. Typology of Users

This part would be dealing with distinctions and definitions of different User segments, main characteristics of major User groups, institutions and organizations as information Users.

3. User Behaviour in Information Seeking and use

This section would include the concept of information seeking and patterns in User demand for information. Factors which affect information transfer/exchange within specific communities (ie. underdeveloped communities). Variables affecting information Use eg. education, culture, wealth, sex, work context, channel, content etc. Barriers to information transfer and use. Assimilation and use of information. Invisible colleges, gatekeeping etc. Behavioral patterns to information flow in bureaucracies, issues of political and personal

values over access and use of information eg. fear of industries to release some information. Issues of technological information transfer from developed to underdeveloped countries.

4. Research Methods
Methods of identifying User Needs eg. surveys, interviews, sampling, literature research, community profiling etc.

5. Methods and Approaches to Identification of Information Needs
This would concentrate on reviewing various methods and approaches which are being used to identify User Information Needs, and their limitations. It would also include case studies to illustrate such methods.

6. User Satisfaction Evaluation
This part would include the problems of determing User satisfaction. Methods of evaluating User satisfaction and the implications of User Needs to the design and provision of information services, products and programs.

7. Project Work
The project assignment should come at the end of the course. The student should demonstrate ability to study the needs of a particular group of users and come up with concrete possible solutions as to how the users information needs can be met.

Learning Opportunities and Teaching Methods

The learning methods will to some extent be based on the methods of a particular University especially in determining the distribution between theoretical lectures and practical applications in which theories and principles are tested against practical situations. My feeling is that one can learn the theories and principles of how to identify User Information Needs but there is no substitute for practical opportunities to be involved in finding out, in the field, the actual information needs of a particular group of Users.

In a situation where the class meets three times a week (one hour sessions each meeting) the lecturer may spend one and a half sessions to present information on a given topic, for example, patterns of user demand for information by decisionmakers, or factors which affect information transfer/exchange within rural communities in underdeveloped societies etc. These lectures are related to assigned readings. The one and a half sessions which are left in the week could be devoted to students critical reactions and short presentations based on the lecture, reading assignments and observation on the topic and its relevance to developing societies or group of countries eg. Black Africa.

In creating optimum learning conditions, I am convinced that an external practical focus is necessary to remove students from the 'Ivory Tower' atmosphere of an academic institution to enable them to get acquainted, objectively, with the status quo of professional practice and thinking, current practice in the relationships between User Needs and information services and products. Also to demonstrate to the students the possibilities and limitations of applying the theoretical constructs they have learnt in a real working situation. This last element is absolutely vital for students and teachers in underdeveloped countries because most of the reading assignments will be based on literature originated from industrialised economies, and inevitably presenting issues of User information needs from a perspective of highly industrialised countries. However, it is my stand that students and teachers in underdeveloped countries have to develop a viewpoint of User Information Needs from the perspective of agrarian economies.

The external practical focus could also include invitations to actual users to narrate how they presently satisfy their information needs, and this can be used in conjunction with case studies, and lectures from practitioners in the information sector on a regular basis each year.

ASSESSMENT OF COURSE EFFECTIVENESS

Course evaluation is necessary and important for the purpose of obtaining feedback which may be used for carrying out improvement and modifications in a dynamic teaching/learning situation (Borko, 1979, page 141). The current practice in most Universities is to assess learning at the terminal point using formal examinations, and an external examiner system. Any feedback that may be forthcoming can only be useful to students in the next years course. This approach also has a major weakpoint in failing to involve students in assessing the effectiveness of the learning experience they have just undergone. Borko (1979) has given what I consider to be a very useful outline of a questionnaire for students to evaluate a course they are undertaking. The questionnaire elicits judgemental evaluations and suggestions for improvement in three primary areas: (1) Anticipated value of course; (2) Lecturers approach and effectiveness; (3) The effectiveness of the methods of teaching. My submission is that such an instrument is very useful and should be administered at least twice, somewhere in the first quarter of the course, and at the end of the course.

There should also be follow-ups to former students and their employers in order to find out how useful/effective was the training/education received in the University.

A QUICK GUIDE TO THE LITERATURE

The subject of User Information Needs no longer suffers from a shortage of supporting literature. Brenda Dervin and Michael Nolan (1986) indicate the existence of 300 potentially useful citations since 1978. If one is to search for relevant literature beyond 1978 it is likely that more than 1000 journal articles, books and monographs, research reports, and mimeograph articles now exist. (Simmons, 1985). The problems are hence those of selecting the most relevant literature for a particular area, and for underdeveloped countries where shortage of foreign exchange act as a brake on the acquisition

of literature, establishing the necessary contacts which will enable acquisition of such literature. Thomas Wilson (1984) has a number of articles offering definitions of information needs, wants and demands and the problems associated with such definitions.

The value of information is the central thesis of Taylors' (1985) article 'Information Values in Decision Contexts'. Griffiths (1982) has also discussed the value of information and related delivery services and products. Palmour and others (1980) have produced a useful handbook on the segmentation of users for a public library system and described various methodologies of finding out User Information Needs. Pauline Atherton (1977) has produced a handbook which can provide a useful starting point for looking at the relationship between information needs and national development. It includes the information needs of what is termed 'the key sectors' of the economy.

User behaviour in seeking information has been discussed by a number of authors of whom only a few will be mentioned here. Belin (1984), Paisley (1980), Dervin (1980) are all among authors at the forefront at advocating that in discussing User behaviour, the focus should be on Users rather than on the information systems and what Users may get out of them. Paisley (1968) points out that the user is the central figure within several spheres, all of which influence his information needs.

Brenda Dervin (1984) has produced a monograph which is useful in looking at the information needs of Users, and the variables influencing these needs. The patterns of User behaviour in seeking information is also the subject of a good article by James Kriekelas (1983). Chen and Hernon (1982) have produced a valuable research project report on how to identify and anticipate User Information Needs from the Users points of view rather than systems point of view.

On the topic of organisation of information needs and patterns of information flow in bureaucracies Chen and Lagler (1974) have pro-

duced suitable supporting literature. The controversial issues of information needs, political and personal tensions, public access to 'sensitive' information have supporting literature in the writings of Bozeman (1981), Holgate (1982) and Stafford (1984). Wilson Aiyepeku (1982) articles represent at least one attempt to research information needs of decision-makers in Nigeria, hence affords a starting point to test whether variables to information needs found to be significant in other cultures holds true also in Black Africa. Aboyade (1982) is useful as an exploratory incursion into how semi-literate users satisfy their information needs. The illiteracy factor in information seeking is also the subject of a publication based on the Vai tribe of Liberia by Scribner and Cole (1981).

Thomas Allen (1986) is essential for the handling of the concepts of invisible colleges, information gatekeepers and how the information needs of scientists and technologists are satisfied. The topic of different methodologies and approaches to identifying user information needs may be supported by the writings of Dervin and Nolan (1986). Case study material of particular user groups is now covered by many authors, for example, Steig (1981) concentrates on the information needs of historians. User needs as a function of the information transfer process is the subject of an article by Morehead (1982). Information needs and uses of Humanities scholars is in an article by Stone (1982). Maurice Line and others (1971) have also produced a useful case study of the information needs of social workers.

The evaluation topic can be supported by a number of papers, for example Lancaster (1977), Palmour (1980) and John Blagden (1980) in a book titled 'Do we really need Libraries'. Bishop and Lewis (1985) have published a useful report on the evaluation of B.N.B. which may be used to demonstrate how to evaluate an information product.

The topic of 'Research Methods' can be supported adequately by any of the social science research texts. However, Nick Moore's (1986) 'How to do Research' has proved a very useful introduction to re-

search for our students. 'Library Surveys' by Line and Stone (1982) is another valuable text.

SUMMARY AND CONCLUSION

This article attempts to justify the inclusion of the subject 'Identification of User Information Needs' as a full course in the curricula for information professionals. It is submitted that manpower needs for the information professionals are largely determined by both social development requirements and national priorities. 'The curricula for information professionals has the broad aim to equip information personnel with relevant competencies', it is argued.

It is held that the recognition of the Information User as the centre of action in information management is a relatively new phenomenon and partly explains the low status of this subject in most curricula for information professionals. This neglect, it is argued, is fading away and hence the need for the curricula to reflect this emerging reality. The article argues that not only is the subject important, but there is adequate content to make up a full course.

A course outline for the subject is proposed and a brief review of some of the most prominent supporting literature is provided.

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INFORMATION AND USERS: HOW TO BRING THEM TOGETHER - THE INTERMEDIARY ROLE OF THE PROFESSIONAL

by. J. M. Ng'ang'a

INTRODUCTION

My task in this paper is to show the role the information professional plays in the utilization of information by all categories of users. I shall attempt to answer the questions: What is information? Who are the users and their characteristics? And against this background look at the intermediary role of the information professional and how he should be trained in order to perform his duties effectively so that the user may be able to get the right information, in the right place, at the right time.

What are the information sciences? They are the professions which are commonly taken to mean archive, librarianship, documentation and information science. It is now accepted that they should also include technical authors, illustrators, film producers, system analysts and all those concerned with the transmission of knowledge. A major function of information scientists is to ensure effective communication of recorded information. For the purposes of this paper, we shall concentrate on the information professionals in the fields of archivists, librarians and information scientists.

INFORMATION

The main commodity of information scientists is Information. Information has now been recognized as an important national resource which needs to be planned and harnessed for use like all other national resources such as energy, oils, agriculture etc. The 1974 UNESCO Intergovernmental Conference on the National Information Systems (NATIS) emphasised this concept namely "Information is an essential part of a nation's resources and access to it is one of the

basic human rights." It also emphasised the importance of information in scientific and economic progress as well as social communication.

This concept was seen as integral to the New International Economic and Social Order as defined at the Sixth Special Session of the U.N. General Assembly where it was stated that "access to information must be a major feature in the improvement of the quality of life for each individual as much as he needs to have available he should have."[1]

It is important to remember that this important resource needs to be harnessed if it is going to be used effectively. Russell Bowden[2] reminds us that like all other resources we are concerned with, it can be wasted. "As water runs off the hills and into the rivers and away into the sea without it being harnessed, so information too can be wasted. It too can flow away into a river of books and periodicals in the sea of shelves and an ocean of stock there remain unused."

What is information? Various definitions have been advanced. It is however noted that it is an ambiguous concept in that many meanings have been proposed depending on the proponent disciplines of interest[3]. For our purposes, information is seen as facts, opinions and data of value to decision making. It is not necessarily limited to what is revealed in the results of study research and scholarship in all fields of knowledge. Let us however remind ourselves that information is not necessarily knowledge. But as Saunders[4] notes, "Information provides essential raw material, which in due course can lead to new knowledge, if only via the restructuring of existing knowledge." Information is an essential commodity for informed decision-making at all levels. Use of information is necessary in solving any problems. Thus as we can see there is a lot of information which is generated every day. Most of it is however transmitted orally but a vast amount of it is recorded in various forms such as books, periodicals, audio-visuals. These records consist of the sum total of man's endeavours, experience and thought. This vast store of knowledge contains information which can be used to solve man's problems if only we can learn how to utilize it effectively.

Since man started recording his thoughts the growth of information has grown exponentially though it is more so in science and technology. In his paper, Information, the Unscarce Recource, Saunders[4] illustrates this growth graphically as follows: "As a tiny indicator of what it might be, it is worth noting that in the case of the U.S.A. alone... there existed in the midseventies 32.000 public, academic and special libraries, plus a further 75.000 school libraries; and that between them they owned a staggering 1.300 million volumes organized and deployed for use."

He further noted that about 600.000 new book titles were published annually in addition to about 8.000 daily newpapers published all over the world. In the scientific field he noted that the biomedical literature exceeded 4 million articles a year and that the Chemical Abstracts were expected to reach a million a year by 1986. The paper also indicates the amount of records which was stored on electronic bibliographic files as well as the rising rate of annual growth. The existing mass of literature and the continuing exponential growth creates a situation difficult to handle but also to access to the contents of that literature. The use of modern technology, professional skills and effective management has to be marshalled in order that the user can be assisted to get the right information at the right time.

This leads me to the question of education for information science professionals. How do we educate a professional who will be able to link the users with the right information? Bernard Franckowiak[5], in his paper "Essential program requirements for the 1980s and 1990s" says, that we should go back to our reason for existence in order to be able to discuss this question. "It is important to understand that the Librarian or professional functions essentially as an information intermediary between the needs and desires of a user population and the larger world of information that exists in countless locations in a growing proliferation of formats. It is important to understand that what the user is concerned with is the intellectual content of the information itself and not necessarily the packaging or the technology required to deliver that information to the users".

THE USERS, THEIR NEEDS AND CHARACTERISTICS

Who are the users and what are their needs? In order to maximise the impact of the library service, the information professional should know something about his clients. Every library has a unique user population. The characteristics of the user population influences stock selection, the kind of service to be given and the methods to be used in dessemination.

Potential users of our information systems range from students whose basic needs are textbooks to high level researchers, and policy makers. Users especially in developing countries will also include a high percentage of people who cannot read. In some areas especially rural areas they could number anything up to 70% of the population. This group will be unable to use print-based information as Mchombu[6] notes. They will also be unable to comprehend methods of thinking and problem solving which accompany the use of print-based information such as use of a variety of sources, and analytical approach to problems.

THE INFORMATION SCIENCE PROFESSIONAL

The fundamental aims of the library profession are (1) to acquire, organise and preserve recorded knowledge and (2) to provide ready access to it for interested users. Few users can make effective use of the mass of undigested data. Indeed what they need is specific and relevant information in an appropriate format.

In his capacity as intermediary, the professional's major role is to link the user and the contents of the documents both under his control or outside it. He does this by selecting, analysing, storing and disseminating information in a such manner that enhances and makes it easy - the very process that the authors of documents started. For effective retrieval purposes, the professional develops retrieval devices such as catalogues, abstracts, indexes, data bases, bibliographies etc.

Of these functions, selection is the most important. For through the selection process, "we take the first crucial step towards making manageable and accessible the vast quantities of information which are being remoselessly added to an existing stock-pile of almost unimaginable magnitude."[6]

Selection as we noted earlier is geared towards meeting user's needs. In order to satisfy such needs, those doing selection need to understand their users and their information needs which could be done through user studies or market research.

After the material have been selected and acquired, they require to be organised and stored in such manner that they can be effetively used. This involves such activities as cataloguing, classification, indexing and abstracting, as well as the production of other necessary retrieval devices thereby leading to dissemination activity.

As we noted above, most users are not able to make effective use of the mass of information. Consequently, provision of information remains as a major role of the professional. He uses his skills in search for information, assists in retrieval, advises on best way to find the required information and where necessary attempts some evaluation of the required information. Indeed the exponential growth of information has seen an increase of positions of information officers not only in special libraries but also in public and academic libraries. The information officers combine information skills and specialist subject knowledge. Thus the professional, as Katz observes, "is an activist in the scholarly, scientific process of gathering and developing various channels of information." It must be emphasised that subject knowledge will be necessary if the professional is to play his intermediary role effectively.

Suffice it to add that the professional must possess understanding of the purposes and activities of librarianship. He should therefore be an expert in one or more areas of bibliography, and be capable of supervising one or more functions of a library. For this to be

achieved, the curriculum of the training institutions must correspond to the knowledge and skills required of the professional.

To perform these functions requires that those who are responsible for selection, organisation and dissemination of information should possess certain basic skills and knowledge. We shall now look briefly at the skills which an information professional should possess and how he should be trained to acquire them.

Among other things a professional should be able to demonstrate some of the following basic skills:

a) management skills;
b) ability to relate to, assess the needs of, and communicate with users;
c) ability to perceive objectives and priorities;
d) awareness of the library's market;
e) ability to create a demand for services;
f) ability to provide specialized services;
g) should be able to help in the exploitation, utilization of new technology to enhance traditional current awareness services;
h) should be able to analyse and synthesize data to provide support for management information systems;
i) should have skills in budgeting and marketing techniques, system analysis, decision theory, statistical analysis and above all ability to communicate ideas both verbally and written;
j) ability to teach users;
k) ability to edit, assess and appropriately package for the user what he needs;
l) knowledge of how information is generated and recorded;
m) ability to demonstrate the basic information technology literacy;
n) political skills.

Suffice to add that in his capacity as an intermediary, the professional is an active performer in the information communication process. He should therefore have an appreciation for not only the varieties of information, but how total information sources may be processed and retrieved for individual users. He should also have

the understanding and appreciation for total service[7]. For service as we are all aware is the heart beat of information work. As mediator, the professional is an important part of the communication system and he assists users in the transmission of the messages by clarifying what type of communication or message is needed by searching the various methods of transmission. It is therefore necessary that the information science professional should be knowledgeable about the channels of communication through which knowledge is generated and communicated, as he is also by nature of his job, a communicator.

Information providers should be skilled in communication skills such as reading, writing of reports, speaking, listening which are essential in organisational effectiveness. Indeed the need to acquire such skills is not only essential for professional staff but it is also necessary for paraprofessionals who should acquire such skills as telephone answering and other skills involving the use of mechanical or electronic equipment. As staff gain experience and move into more senior positions, they are likely to be involved in staff selection and recruitment which involve more complex skills such as interviewing techniques, preparation of clear and concise performance goals and objectives, report writing etc.

Basic organisational skills should be taught and learned in the educational process. It is however expected that although communication skills will be formally taught in library schools the professionals are expected to know that learning is a continuous process from formal training institutions to working areas. A lot of formal learning has to be adapted and the informal adopted. A good professional may be measured by his ability to integrate formal learning and working experience both for the good of the profession and betterment of his job.

It is now accepted that although we develop catalogues, bibliographies, indexes and abstracts as access tools to documents, they are also so technical on their own right that they impede on the very access which they were expected to assist. Hence the need to famil-

iarise the users on how to use these tools - a skill the professionals should be taught. It is therefore important that we should no longer take for granted that every professional can impart on this skill. It should be included in the curriculum and be effectively covered.

CURRICULUM

The purpose of the curriculum is to produce a professional workforce able to understand and satisfy the information needs of particular populations or communities of users. In order to equip information professionals with the relevant skills and abilities, there is need to design a curriculum which will allow acquisition of basic skills and the necessary specializations. The curriculum should be user oriented and should seek to develop and integrate a conceptual frame of reference upon what specific skills and knowledge can be taught. The curriculum should as far as possible integrate environmental courses that makes the library information science programme relevant. For instance a curriculum designed for people who wish to work in school libraries should include a study of Learning theory and child development. This could either be offered within the school of Library and Information Science or arrangements can be made for students to take the courses in other departments.

The curriculum we produce should be determined by the needs of the society: both present and the future. Bearing in mind the three professions, namely archivists, librarians and the information scientists, and the need to harmonise the supply of information, the curriculum should be designed in such a way that professionals we produce will have a basic understanding of the total information system while at the same time he will be a specialist in one of them. Such a curriculum should stem from a common core, supported by elective or specialized courses.

At this stage let us identify areas of common ground between the archivists on one hand and librarians and information scientists on the other. Considering the characteristics of the material each group

hold, and the services provided, the following activities are similar i.e. management, abstracting, indexing; application of technology to information handling, storage and dissemination; user education including user studies; research methodology, record management, preservation and conservation of documents, communication skills, information retrieval and information sources.

The common core is defined as those learning experiences which every member of the profession regardless of his speciality must have gone through in order to function as an effective professional. In this connection, the three areas which form the core are:

a) Organization of knowledge and retrieval skills;
b) Knowledge of sources and their guides;
c) Management.

The curriculum should prepare students for the professional problems they will face after graduation as well as for those which they may face years ahead. This calls for the design of a flexible curriculum. Above all the curriculum should enable the student to understand information flow in society including users and user needs, the economics of information, the information industry, and the role of the professionals in the information transfer process. This can perhaps be achieved by laying greater emphasis on such development of courses such as research methodology, information in society; introducing such courses as information systems analysis, information systems planning; marketing of information as well as courses dealing with application of technology in data handling.

The essentials of a basic course could be grouped under the following:

1) Philosophy - place of librarianship and information work in the scheme of things, the aims and purposes of different types; the development of national networks and the increasing importance of information in a complex society;
2) Clientele - their nature, needs and demands. Methods of meeting these - staff inter-face with users;

3) Tools of the trade - Library or archival materials, their organization, exploitation and preservation.

Other courses should include:

- Management;
- Application of information technology; and
- Research methodology.

Essentially, the basic curriculum for a first professional course should cover the basic aspects of information handling from its generation to its use.

Education of users must also be given a high priority. Courses should include user education, marketing, user studies, promotion, dissemination and diffusion, repackaging of information and direct user contact with follow-ups.

Newer areas of information technology and services which can prepare graduates for information related careers such as those listed below should be included:

- Media management;
- Book publishing and production;
- Records Management;
- Software development.

In developing countries, the curriculum should cater for the information needs of rural communities teaching students how to transfer and communicate with a user community that is illiterate. Practical training should form an integral part of information science education.

In designing the curriculum it is necessary also to think about course objectives, teaching methods and methods of evaluating the teaching. The objectives should be derived from user needs and institutional needs for professional staff. Peter Jordan[9] has identified the following -

"to produce students who have

1) a knowledge of the main sources of information whatever the format.
2) the skill to use the sources to discover information in the most cost-effective way.
3) the ability to record and store information for effective retrieval.
4) the communication skills to analyse the needs of individuals who might make use of information services and provide them with information to meet those needs.
5) an awareness of the environmental factors which affect the diffusion of information and have reached a well informed opinion of their own such as legislation, publishing socio-economic factors, ethical considerations.
6) a user-oriented attitutde rather than a purely materials - based one."

To achieve these objectives, teaching should be through a variety of methods such as lectures, tutorials where groups of students discuss seminar papers by other students; use of case-studies etc. A subject like management could be taught through general lectures followed by tutorial groups of students with common interests to discuss the topics relating them to their needs.

Evaluation should be by continuous assessment, final year examinations assessed by both internal and external moderators. It may be necessary to establish a dialogue between the teachers and practitioners where discussions about the courses and their effectiveness take place. Such dialogue should give the teachers feelings of the employers while the employers also have a chance to learn about new research developments. In East, Central and Southern African Region such a meeting was held at the University of Botswana in August 1986 and proved very useful in exchange of ideas.

CONCLUSION

It has been the aim of this paper to identify the curriculum required to produce an information professional who will play a leading role in linking the user with his information needs. Let us add that the professional we are talking about will, in addition to his service role, be an information manager. In order to play his intermediary role effectively he will need to provide specialized subject knowledge. To help in developing these roles I wish to conclude by saying that to educate and equip the professional with requisite skills and abilities, his education should be provided in institutions of higher learning.

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ANNEX I

NEWS MAGAZINE: INFORMATION TRENDS

In replacement of "Librarianship and Documentation Studies - A Handbook of Teaching and Learning Materials" DSE intends to publish the news magazine "Information Trends - A Review of Developments in Information Studies in Eastern and Southern Africa", of which the first issue will be distributed in February 1988. Two more issues should follow in July and November of the same year. This news magazine will be published under the following assumptions:

Aim:

Information Trends will be a regular publication reviewing the developments in information studies (librarianship, archival studies and information science) in Eastern and Southern African countries. The main objective will be to bring together in a single publication the current state of the art of the three disciplines in the sub-region for use by information and documentation educators and students. In addition, the publication will serve as a useful vehicle for informing the personnel of the three disciplines within the sub-region as to what is taking place on national and sub-regional levels.

Writing for "Information Trends":

Information Trends aims to be more of a news magazine than a newsletter or academic journal. Contributors are therefore requested to submit short articles dealing with current activities in information work which should not dwell on theoretical aspects, but center on practice and experience. Contributions may include articles, news and information about current and forthcoming events as well as details, reviews and abstracts of recent conferences/seminars/workshops, completed and on-going research, new publications, etc. produced within the countries of the subregion, indicating the sources where complete documents can be obtained.

Presentations of Manuscripts:
Manuscripts should be typewritten on one side only of standard A 4 paper. Double spacing should be used throughout and adequate margins should be left on both sides on the paper. Manuscripts should be consecutively numbered.

Bibliographic References:
All works or individuals used in the preparation of the manuscript should be cited at the end of the paper. The use of notes at the bottom of a page should be avoided. References should follow closely the norm of ISO 690 - 1975.

Submission:
All contributions should be submitted to the Editorial Board, either directly or through the respective Editorial Advisor of the relevant country.

Publication:
The Editor's decision with regard to the publication of any item will be final. Contributors of articles and reviews will receive one complementary copy of the issue in which their work appears. Publication dates are February 15th, August 15th and November 15th of each year. Contributions must reach the Editorial Board six weeks prior to the indicated dates.

Publisher:
German Foundation for International Development (DSE), Berlin (West).

Editor:
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Responsible for the preparation of the content of the news magazine to manuscript form.

Editorial Advisors:
One Editorial Advisor of each of the remaining countries of the sub-region not represented in the Editorial Board will be appointed until the end of 1987. Their names will appear in the first issue of Information Trends. These Editorial Advisors will be responsible to act as a referral point for articles, as well as to referee on contributions which the Editorial Board would like to have a second opinion about.

The above paragraphs reflect the agreed minutes of the meeting of the Editorial Board of "Librarianship and Documentation Studies" held in Bonn/FRG on 27th and 28th August, 1987. All recipients of this third volume of the handbook are kindly requested to spread the gospel about the new publication "Information Trends" and provide contributions to it.

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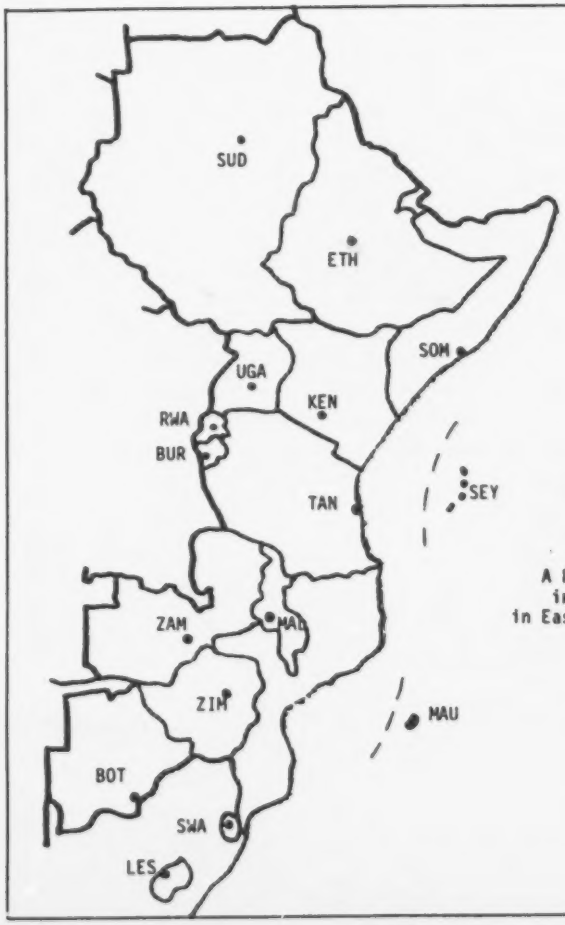

Lutz Hüttemann (Ed)

INFORMATION TRENDS

A Review of Developments in Information Studies in Eastern and Southern Africa

Volume 1
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ANNEX II

Information

DEUTSCHE STIFTUNG FÜR INTERNATIONALE ENTWICKLUNG
German Foundation for International Development
Education, Science and Documentation Centre
Information and Documentation Training Section

October 1987

THE PUBLICATIONS IN INFORMATION AND DOCUMENTATION

In connection with its Information and Documentation Training Programme DSE published reports and other documents in the fields of Librarianship, Documentation and Archives since many years. The following publications are still available and may be ordered free of charge by clearinghouses, training institutions, national library services and associations (and individuals, if related to their working situation or otherwise justified):

DOK 1310 C/a Librarianship and Documentation Studies: A Handbook of Teaching and Learning Materials; Volume 3 (1987); (87 pages).

DOK 1310 C/a Volume 2 (1986); (96 pages)

DOK 1310 C/a Volume 1 (1985); (134 pages)

DOK 1417 A/a Establishment and Management of a National Information Service in Botswana, Workshop Papers Gaborone 23 to 27 February 1987 (193 pages)

DOK 1416 C/a Boadi, B.Y. et al: Introduction to Librarianship and Documentation, Four Teaching and Learning Modules used during long vacation courses at the University of Botswana 1984 to 1987 (198 pages)

DOK 1401 A/b Gestion des Services d'Information, Rapport d'un stage realisé à Kigali/Rwanda, 20 and 31 octobre 1986 (93 pages)

DOK 1347 A/a Co-ordination and Improvement of National Information Services, Mbabane and Maseru Workshop Papers; Mbabane 24 - 28 Feb., 1986; Maseru 3 - 7 March, 1986 (232 pages)

DOK 1346 A/a Use of Computers in Information Handling, Training Workshop; Nairobi 21 April - 2 May, 1986 (138 pages)

DOK 1311 A/a Trade Information Services, Seminar Papers; Arusha 22 April - 3 May, 1985 (100 pages)

DOK 1309 A/a Manpower Training Needs, Proceedings and Papers of the Information Experts Meeting; Harare 18 - 21 March, 1985 (159 pages)

DOK 1308 A/a Establishment, Function and Management of a National Library and Documentation Service, Workshop Report; Harare 6 - 15 March, 1985 (182 pages)

DOK 1185 A/a Management of Information Services, Workshop Papers; Arusha 9 - 20 May, 1983 (94 pages)

Working Document Library Training in Eastern, Central and Southern Africa: A Reader; Berlin (West) 1 - 9 Sept., 1982 (467 pages)

DOK 1057 B/a The Implementation of Modern Information and Documentation Systems and Services with Special Reference to Information Needs in Eastern Africa, Course Report, 1980 (28 pages)

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